OPERATOR'S MANUAL



426, 436, 456 (TIER 2)

EN - 9811/3400
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THIS MANUAL SHOULD ALWAYS STAY WITH THE MACHINE

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Safety Notices

Important Information

T1-042

The Operator Manual

⚠ WARNING

You and others can be killed or seriously injured if you operate or maintain the machine without first studying the Operator Manual. You must understand and follow the instructions in the Operator Manual. If you do not understand anything, ask your employer or JCB dealer to explain it.

INT-1-4-2

Do not operate the machine without an Operator Manual, or if there is anything on the machine you do not understand.

Treat the Operator Manual as part of the machine. Keep it clean and in good condition. Replace the Operator Manual immediately if it is lost, damaged or becomes unreadable.

Safety Warnings



This safety alert system identifies important safety messages in this manual. When you see this symbol, be alert, your safety is involved, carefully read the message that follows, and inform other operators.

In this publication and on the machine, there are safety notices. Each notice starts with a signal word. The signal word meanings are given below.

⚠ DANGER

Denotes an extreme hazard exists. If proper precautions are not taken, it is highly probable that the operator (or others) could be killed or seriously injured.

INT-1-2-1

⚠ WARNING

Denotes a hazard exists. If proper precautions are not taken, the operator (or others) could be killed or seriously injured.

INT-1-2-2

⚠ CAUTION

Denotes a reminder of safety practices. Failure to follow these safety practices could result in injury to the operator (or others) and possible damage to the machine.

INT-1-2-3

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Introduction

About this Manual

Machine Model and Serial Number

This manual provides information for the following model(s) in the JCB machine range:

– 426 from SN 1231500
– 436 from SN 1305000
– 456 from SN 1169000.

Using this Manual

T1-044

This manual is arranged to give you a good understanding of the machine and its safe operation. It also contains maintenance information and specification data. Read this manual from front to back before using the machine for the first time. Particular attention must be given to all the safety aspects of operating and maintaining the machine.

If there is anything you are not sure about, ask your JCB distributor or employer. Do not guess, you or others could be killed or seriously injured.

General warnings in this chapter are repeated throughout the book, as well as specific warnings. Read all the safety statements regularly, so you do not forget them. Remember that the best operators are the safest operators.

The illustrations in this manual are for guidance only. Where the machines differ, the text and or the illustration will specify.

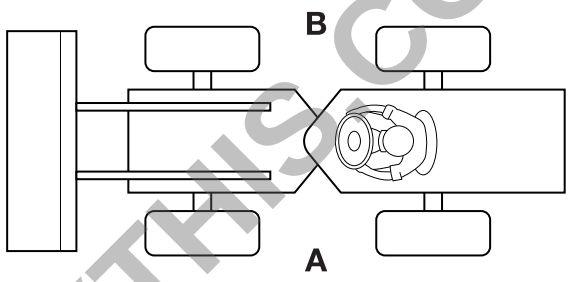
This manual contains original instructions, verified by the manufacturer (or their authorised representative).

The manufacturer's policy is one of continuous improvement. The right to change the specification of the machine without notice is reserved. No responsibility will be accepted for discrepancies which may occur between specifications of the machine and the descriptions contained in this publication.

All optional equipment included in this manual may not be available in all territories.

Left Side, Right Side

In this manual, 'left' **A** and 'right' **B** mean your left and right when you are seated correctly in the machine.



T033800-1

Fig 1.

Cab/Canopy

T1-003_2

This manual frequently makes references to the cab. For instance, 'do not operate the machine without a manual in the cab'. It should be noted that these statements also apply to canopy build machines.

Cross References

T1-004_2

In this publication, page cross references are made by presenting the subject title printed in bold, italic and underlined. It is preceeded by the 'go to' symbol. The number of the page upon which the subject begins, is indicated within the brackets. For example: ⇨ ***Cross References (3)***.

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Operation

Introduction

T2-006_2

The aim of this part of the manual is to guide the operator step-by-step through the task of learning how to operate the machine efficiently and safely. Read the ***Operation*** section through from beginning to end.

Before you start the machine, you must know how the machine operates. Use your manual to identify each control lever, switch, gauge, button and pedal. Do not guess. If there is anything you do not understand, ask your JCB distributor.

The operator must always be aware of events happening in or around the machine. Safety must always be the most important factor when you operate the machine.

When you understand the operating controls, gauges and switches, practice using them. Drive the machine in an open space, clear of people. Get to know the 'feel' of the machine and its driving controls.

Finally, do not rush the job of learning, make sure you fully understand everything in the ***Operation*** section. Take your time and work efficiently and safely.

Remember

BE CAREFUL
BE ALERT
BE SAFE

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Cab Layout

Component Key

The cab component layout illustration shows a typical machine. Your machine may look different to the model shown.

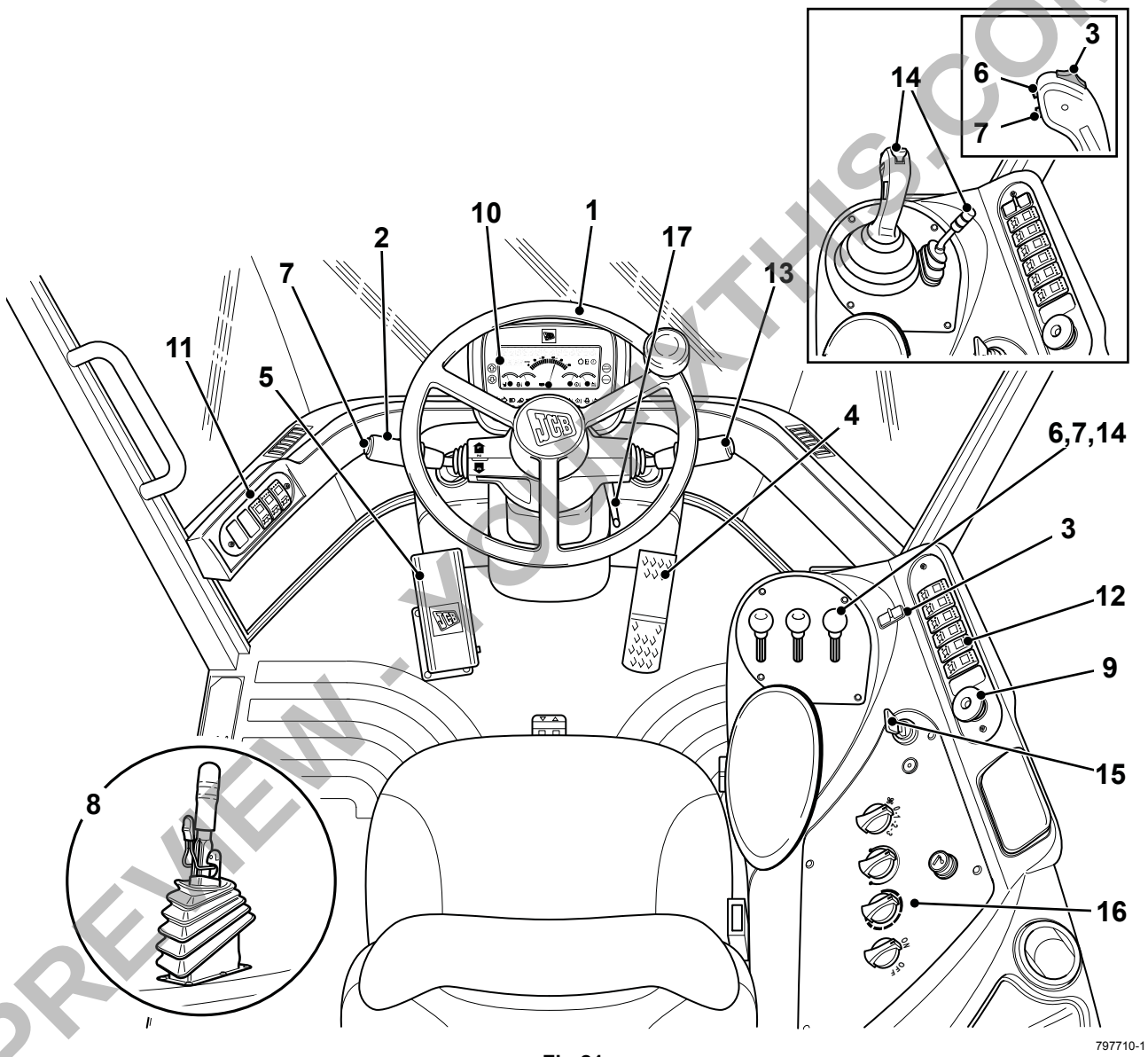


Fig 21.

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Optional Attachments

Introduction

T4-002_3

⚠ WARNING

Use only the JCB approved attachments that are specified for your machine. Operating with non-specified attachments can overload the machine, causing possible damage and machine instability which could result in injury to yourself or others.

The use of non-approved attachments could invalidate your warranty.

2-4-5-2_1

⚠ CAUTION

If you have an attachment which is not covered in the Operator Manual do not install it, use it or remove it until you have obtained, read and understood the pertinent information. Install attachments only on the machines for which they were designed.

5-5-1-1_2

A wide range of optional attachments are available to increase the versatility of your machine. Only JCB approved attachments are recommended for use with your machine. Consult your JCB Distributor for the full list of approved attachments available.

This part of the manual includes general information on attachment operation and instructions for installation and removal of attachments.

Some attachments are supplied complete with instructions on safety, installing and removing, operation and maintenance. Read and fully understand the information before fitting, using and servicing the attachment. If there is anything you do not understand, ask your JCB Distributor.

Before using any attachment, read again ***Working With The Machine*** in the Operation section and consider how the attachment is going to affect operational safety. With the attachment fitted, there may be changes in the machine's centre of gravity or overall dimensions. This could have an effect on, for example, machine stability, the gradients on which it is safe to operate or the safe distance from power lines.

Practice using attachments off the job before working with them for the first time.

JCB attachments are designed and manufactured specifically to suit the machine's hydraulic system, mounting arrangements and safe load requirements. Attachments which are not designed for use with this machine may cause damage and create safety hazards for which JCB cannot be held responsible. In addition the machine's warranty and any other legislative compliance may be affected by the use of non JCB approved attachments.

If your machine needs the hydraulic system adapting to facilitate the use of auxiliary attachments, you must consult your distributor. Only suitably qualified personnel must re-route hydraulic hoses.

All optional attachments will have limits on their operation. i.e. lifting capacity, speeds, hydraulic flow rates, etc. Always check in the literature supplied with the attachment or in the Specification section of this manual. Some specification limits may also be displayed on the attachments Data/Rating Plate.

⚠ CAUTION

Some attachments may contact parts of the machine when in the fully folded position. Take extra care to avoid damage to the machine.

3-4-1-4

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Transporting the Machine

⚠ WARNING

The safe transit of the load is the responsibility of the transport contractor and driver. Any machine, attachments or parts that may move during transit must be adequately secured.

5-2-5-9

Note: *Before transporting the machine make sure that you will be obeying the rules and laws of all the areas that the machine will be carried through.*

Make sure that the transporting machine is suitable. See ***Static Dimensions (Specifications Section)*** for the dimensions of your machine.

⚠ WARNING

Before moving the machine onto the trailer, make sure that the trailer and ramp are free from oil, grease and ice. Remove oil, grease and ice from the machine tyres. Make sure the machine will not foul on the ramp angle. See Static Dimensions in SPECIFICATION section for the minimum ground clearance of your machine.

2-2-7-5_1

1 Put the trailer in position:

If the machine is serviceable, use any available position.

If the machine is unserviceable, you must align the trailer with the rear of the machine.

2 Put chocks at the front and rear of the trailer wheels.

3 Make sure the ramps onto the trailer are in the correct position and are attached securely.

4 Set the loader arm to the road travel position. Refer to ***Preparing for Road Travel***.

5 Move the machine onto the trailer:

a Carefully reverse a serviceable machine onto the trailer.

b Lift a unserviceable machine into position on the trailer.

Important: *Put chocks at the front and rear of all four tyres.*

6 Engage the park brake and set the transmission to the neutral position.

7 When the machine is safely in position, lower the attachment onto the trailer, then stop the engine.

8 Install the articulation lock. Refer to ***Articulation Lock***.

9 Make sure that the total height of the load is within the regulations, adjust the height if necessary.

10 Secure the cab in position.

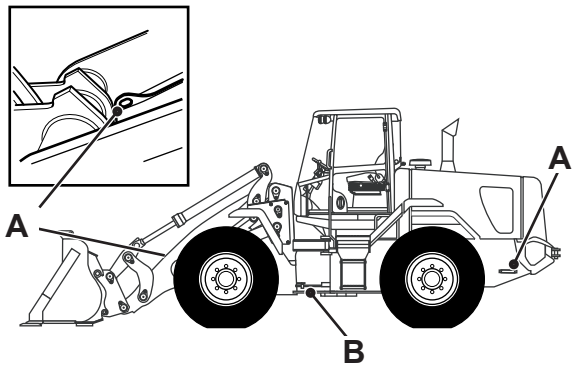
11 Put a cover on the exhaust stack.

12 Use the tie-down/lift points **A** to attach the machine to the trailer with chains.

Note: *The tie-down labels identify the correct positions.*

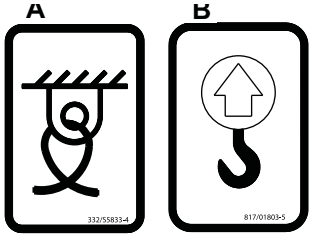
13 Measure the maximum height of the machine from the ground. Make sure the driver knows the clearance height before he drives away.

Note: *Some machines have an extra set of tie-down points **B**.*



397160-2

Fig 57.



817-01803-6

Fig 58. Tie-down/sling point labels

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Routine Maintenance

Service Requirements

Introduction

T3-095

Your machine has been designed and built to give maximum performance, economy and ease of use under a wide variety of operating conditions. Prior to delivery, your machine was inspected both at the Factory and by your Distributor to ensure that it reaches you in optimum condition. To maintain this condition and ensure trouble free operation it is important that the routine services, as specified in this Manual, are carried out by an approved JCB Distributor at the recommended intervals.

This section of the Manual gives full details of the service requirements necessary to maintain your JCB machine at peak efficiency.

A Service Manual for your machine is available from your JCB Distributor. The Service Manual contains information on how to repair, dismantle and assemble your machine correctly.

It can be seen from the Service Schedules on the following pages that many essential service checks should only be carried out by a JCB trained specialist. Only JCB Distributor Service Engineers have been trained by JCB to carry out such specialist tasks, and only JCB Distributor Service Engineers are equipped with the necessary special tools and test equipment to perform such tasks, thoroughly, safely, accurately and efficiently.

JCB regularly updates its Distributors advising them of any product developments, changes in specifications and procedures. Therefore only a JCB Distributor is fully able to maintain and service your machine.

A Service Record Sheet or Book is provided which will enable you to plan your service requirements and keep a service history record. It should be dated, signed and stamped by your Distributor each time your machine is serviced.

Remember, if your machine has been correctly maintained, not only will it give you improved reliability but its resale value will be greatly enhanced.

Owner/Operator Support

JCB together with your Distributor wants you to be completely satisfied with your new JCB machine. If you do encounter a problem however, you should contact your Distributor's Service Department who are there to help you!

You will have been given the names of the relevant service contacts at your Distributor when the machine was installed.

To get the most from your Distributor please help them to satisfy you by:

1 Giving your name, address and telephone number.

2 Quoting your machine model and serial number.

3 Date of purchase and hours of work.

4 Nature of the problem.

Remember, only your JCB Distributor has access to the vast resources available at JCB to help support you. In addition, your Distributor is able to offer a variety of programmes covering Warranty, Fixed Price Servicing, Safety Inspections, including weight tests, covering both legal and insurance requirements.

Service/Maintenance Agreements

To help plan and spread the costs of maintaining your machine, we strongly recommend you take advantage of the many Service and Maintenance Agreements your Distributor can offer. These can be tailor made to meet your operating conditions, work schedule etc.

Please consult your JCB Distributor for details.

Initial Service and Inspection

T3-005_2

To further protect your machine's performance it is essential your JCB Distributor carries out an initial service and inspection when the machine is one month old or when it has completed 100 hours of operation (whichever

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Fluids, Lubricants and Capacities

Specifications

JCB recommend that you use the JCB lubricants shown as they have been verified by JCB for use on JCB machines. However, you could use other lubricants that are equivalent to the JCB standards and quality or offer the same machine component protection.

Table 20.

Item	Capacity		Fluid/Lubricant	JCB Pat Number	Container Size(1)
	Litres	**Gal**			
Fuel System			Diesel		
- 426, 436	230	50.6			
- 456	320	70.4			
Engine (Oil)			JCB Engine Oil EP 15/W40	4001/1805	20 Litres
- 426, 436	14	3.1			
- 456	18.9	4.2	(-10 to 50°C)(2) Caution: Do not use ordinary engine oil		
Engine (Coolant)			JCB HP Antifreeze HP/Coolant	4006/1120	20 Litres
- 426, 436	35	7.7			
- 456	40	8.8			
Gearbox(3)			JCB HP Universal ATF	4000/2305	20 Litres
- 426	27	5.9			
- 436	32.5	7.1			
- 456	34	7.5			
Axles			JCB Gear Oil LS Plus	4000/3905(4)	20 Litres
- 426 (Front)	39	8.6			
- 426 (Rear)	37	8.1			
- 436 (Both)	39	8.6			
- 456E HT (Rear), 456E ZX (Both)	51	11.2			
- 456E HT (Front)	69	15.2			
Axles MT-I 3065, 3075, 3085 and 3095			JCB Gear Oil HP Plus	4000/2205	20 litres
- 426E (Both), 434S and 436 (Rear)	23	5.1			
- 434S, 436 (Front) 456 (ZF)	35	7.7			
Hydraulic System(5)			JCB Hydraulic Fluid EP 46	4002/1605	20 Litres
- 426, 436	210	46.2			
- 456	215	47.3			
Grease Points			JCB Special HP Grease(6)	4003/2017	400g x24
Auto Greasing System (if fitted)			JCB Special MPL EP Grease	4003/1501	400g x24

(1) For information about the different container sizes that are available (and their part numbers), contact your JCB Dealer.
(2) If the quoted engine oil is not available, then the engine oil must be changed every 250 hours.
(3) The figure quoted is total system capacity. Use the 'MAX' and 'MIN' marks on the dipstick when filling the system.
(4) Must be suitable for use with oil immersed brakes and Limited Slip Differentials (LSD).
(5) The total hydraulic system capacity depends on the equipment being used. Fill the system with all rams closed and watch the level indicator.
(6) If JCB Special MPL EP Grease is used for normal greasing, all 100 hour greasing operations must be carried out at ten (10) hour intervals.

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Pre-start Cold Checks, Service Points and Fluid Levels

Table 7. Engine

	Operation	10	50	100(1)	100	500	1000	2000
Oil Level and Condition	Check	☐	☐	☐	☐	☐	☐	☐
Oil and Filter	Change(2)					☐	☐	☐
Coolant	Change							☐
Coolant Level	Check	☐	☐	☐	☐	☐	☐	☐
Coolant Strength and Condition	Check					☐	☐	☐
Air Cleaner Dust Valve	Clean(3)			☐	☐	☐	☐	☐
Air Cleaner Outer Element	Change(4)					☐	☐	☐
Air Cleaner Inner Element	Change							☐
Fuel System For Leaks and Contamination	Check	☐	☐	☐	☐	☐	☐	☐
Fuel Filter	Drain		☐	☐	☐	☐	☐	☐
Fuel Filter	Change						☐	☐
Fuel Sedimenter	Check					☐	☐	☐
Drive Belt Condition (5)	Check			☐		☐	☐	☐
Valve Clearances	Check/Adjust			☐			☐	☐
External Oil Leaks	Check	☐	☐	☐	☐	☐	☐	☐

(1) First 100 Hours Service only, to be completed by your JCB Distributor.
(2) In arduous conditions change the oil and filter after every 250 hours or three months (whichever comes first).
(3) Clean more often when working in dusty operating environments
(4) Change outer element more frequently in dusty operating environments.
(5) Change if necessary.

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Loader Arms and Shovel

HT Machines

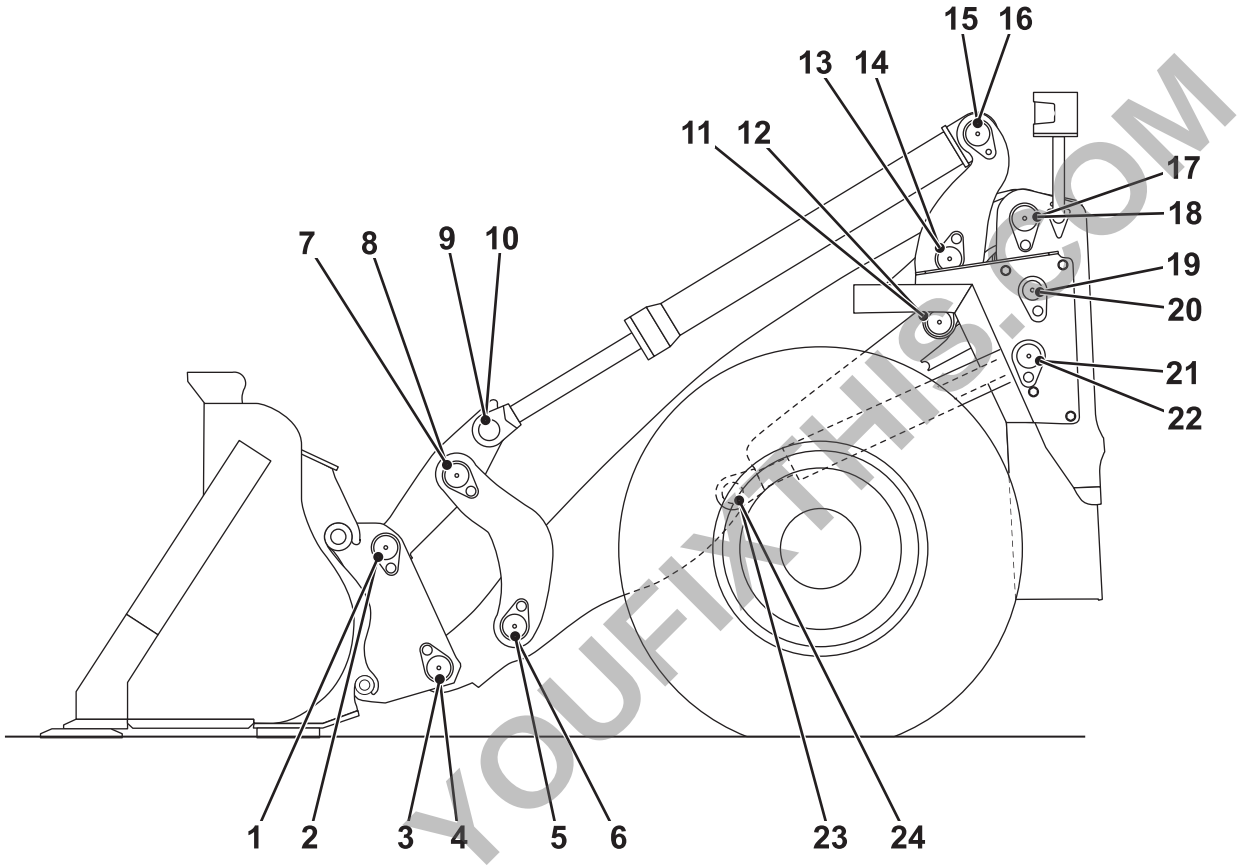


Fig 67.

Shovel and Link Pivot-Pins:

Total of 10 grease points. (**1** to **10**).

Loader Arm Pivot-Points:

Total of 14 grease points (**11** to **24**)

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